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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/038,230	03/11/1998	TSUGUO KOYANAGI	1217-980347	8053

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EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/038,230	<b>Applicant(s)</b> KOYANAGI ET AL.	
	<b>Examiner</b> Daniel S. Metzmaier	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 5 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1 and 5 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Claims 1 and 5 are pending.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as obvious over WO 95/33787, as evidenced by Enomoto et al., US 5,935,700, in view of Yoneda et al, US

5,316,714. WO 95/33787 is considered to have the same or substantially the same disclosure as Enomoto et al, 5,935,700, and qualifies as prior art under 35 USC 102(b). Enomoto et al is employed as an English language equivalent thereto and is referred to hereafter.

Enomoto et al (abstract, column 3, et seq; examples, and claims) disclose composite particles of silica and at least one other inorganic oxide other than silica. Suitable particles are taught (columns 3 to 4, lines 62 to 10) to range in size from 10 nm to 2 microns. Said range includes applicants claimed range of 10 to 30 nm. Said range is defined only by applicants' examples and applicants teach (page 6, lines 20-23) the size of the composite particulates is not particularly limited as long as the sol is stable.

Enomoto et al (column 7, lines 26-47) teaches the composite oxides may be employed as an organosol in alcohols, glycols and ketones which read on the required dielectric constant claimed. Enomoto et al further teaches the particles may be surface modified by silane coupling agents. Enomoto et al (examples; particularly example 6) teaches the silica to other oxide ratio within the range of 3 to 500.

Enomoto et al differs from the claims in the particular silane coupling agent treating said composition.

Yoneda et al is cited on the Enomoto et al reference. Yoneda et al teaches glycol dispersions for imparting slipperiness to polyester films. Yoneda et al (column 7, lines 15 et seq) teaches coupling agents for treating the particulate sols including those exhibiting a molecular polarizability claimed. Please contrast the Yoneda et al species with those disclosed at page 22, table 1 of the specification.

These references are combinable because they teach providing slipperiness to polymer films. Said references are directed to related art as evidenced by the citation of Yoneda et al on the Enomoto et al patent. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the coupling agents taught in the Yoneda et al reference as obvious coupling agents conventional in the art and broadly taught in the Enomoto et al reference. Furthermore, the skilled artisan would have been motivated to employ the aminosilane as an exemplified (table 2c) species for the advantage of providing slipperiness.

Applicants' comparative data does not show criticality for the use different silanes having the molecular polarizability in glycol suspensions. Furthermore, applicants state the particle size is critical to the extent a stable sol is formed.

One of ordinary skilled in the art at the time of applicants invention to employ would have reasonably expected the formation of glycol sols surface modified with the silanes of Yoneda et al would have produced stable sols upon reading the Enomoto et al reference in view of the Yoneda et al reference.

### ***Response to Arguments***

5. Applicant's arguments filed February 17, 2004 have been fully considered but they are not persuasive.

6. Applicants (pages 6 and 7) assert the molecular polarizability is not disclosed in the references and the prior art wants to improve the hydrophobic properties of the particles. Said arguments have not been deemed persuasive since the prior art teaches treatment materials (silanes) reading on the claimed molecular polarizability, applicants

have not shown said materials to be outside of the claimed range, the claims do not specify the dispersing materials for the sol particles to be dispersed other than by dielectric constant that reads on the dispersing agents in the prior art references.

7. Applicants' (page 7) arguments regarding the intended use of the materials and properties imputed to the compositions based on said intended use does not limit the scope of the claimed compositions which may be used for the thermoplastic resins in the prior art.

8. Applicants (page 8) assert the prior art does not teach stable sols and modified particles in solvent. The prior art Enomoto et al and Yoneda et al clearly teach the use of modified particulate materials and solvents as dispersing agents to make colloidal dispersions (sols), wherein the materials are compatible with their end use. Yoneda et al specifically teaches the aminosilane, which read on the molecular polarizability, for the advantage of slipperiness. Applicants do not rebut said facts, which serve as the motivational basis for one having ordinary skill in the art to modify the teachings of WO 95/33787, as evidenced by Enomoto et al., US 5,935,700.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the


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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Daniel S. Metzmaier  
Primary Examiner  
Art Unit 1712

DSM